

ABSTRACT

TITLE: AN ANATOMICAL STUDY OF THE EXTRATEMPORAL
RAMIFICATION OF SEVENTH CRANIAL NERVE IN THE PATEY'S PLANE OF
GLANDULAE PAROTIS AND ITS BRANCHES IN THE FACE WITH
ANATOMICAL LANDMARKS

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INTRODUCTION: Expression is an Art. The facial expressions are brought out by the facial muscles. These facial muscles are supplied by the nerve of the second branchial arch, i.e the seventh cranial nerve, which is also called as "Facial Nerve". Preservation of the facial nerve during rhytidectomy, parotidectomy and other cosmetic and therapeutical surgeries like surgical treatment of zygomatic arch fracture, mandibular ramus fracture etc., have mandated a proper and clear understanding of seventh cranial nerve anatomy in the face and its relations to fascias of the face and other related anatomical structures.

AIMS & OBJECTIVES: Facial nerve anatomy is a subject of interest for the plastic surgeons, oromaxillofacial surgeons, orthopaedic surgeons, oto-rhino-laryngologists, general surgeons etc. for the various clinical procedures on the face. Care should be taken to preserve the normal anatomy of the face as far as possible during various

clinical procedures with the aid of thorough anatomical knowledge. Thus in the interest of the facial nerve anatomy, the present study is conducted about the course of seventh cranial nerve from stylomastoid foramen through the Patey's facio-venous plane of the glandulae parotis and its terminal branches. Parameters like distance of facial nerve from stylomastoid foramen to its bifurcation point, relation of facial nerve to retromandibular vein, branching pattern of the facial nerve, relation of the terminal branches of facial nerve to neighbouring anatomical structures, location of the terminal branches to serve as anatomical landmarks, etc., are studied.

MATERIALS & METHODS: 50 cervicofacial halves from 25 cadavers are used for this study purpose. Digital Vernier calliper, measuring tape and dissection instruments are used in this study. Conventional dissection method is followed in this study.

OBSERVATION & RESULT: The extracranial course of facial nerve entering the parotid gland is observed for various parameters. The mean distance of facial nerve from the stylomastoid foramen to its bifurcation point was 1.28 cm, in 2% of cases the retromandibular vein was between the branches of facial nerve, in 84% of the cases, buccal branch of facial nerve was given by both the rami, four types of branching pattern of the facial nerve are observed, 76% of the buccal branch was inferior to the parotid duct, 76% of marginal mandibular nerve coursed inferior to the inferior border of mandible, with a mean distance of 1.4 cm, in 4% of cases the facial nerve was both superficial and deep to the facial artery, depth of the terminal facial nerve branches from anterior border of parotid gland are measured, communication between auriculotemporal and temporal branch of facial nerve was observed in 1 specimen and landmarks for the terminal branches are evaluated.

CONCLUSION: This study has been conducted on the interest of bringing out the fact that, variations of the facial nerve are multiple and a sound knowledge of this fact is mandatory for surgeons to avoid iatrogenic complications in clinical procedures. The greater the communication between the branches of facial nerve, greater will be the chance of recovery from facial paralysis. Hence, this study has been accomplished to contribute to the subject of facial nerve anatomy, its variations, and its relation to neighbouring anatomical structures and landmarks to locate the terminal branches of facial nerve, thereby promoting an integrated approach for a better clinical outcome.

KEYWORDS: Seventh Cranial Nerve, Glandulae Parotis, Retromandibular vein, Facial artery, Inferior border of Mandible, Parotid duct, Facial Nerve, Parotid Gland.